

REMARKS

Claims 1, 4, 10, 13 and 16 stand rejected under 35 U.S.C. 102(e) as being anticipated by Chaudhuri et al. (U.S. Patent No. 6,223,171, hereinafter Chaudhuri '171). In response, Applicants amended the independent claims to clarify that the comparison occurs immediately after parsing the issued SQL sentence “without user interaction,” and respectfully traverse the rejection as it applies to the amended claims.

The Examiner cites Chaudhuri '171 as teaching at col. 23, lns. 39-67 and in FIG. 15 the step of comparing costs of the workload (*i.e.*, retrieval condition) between the configurations with and without an index on column B and a 2-column index (B, A). However, the comparison requires an administrator (*i.e.*, user interaction) to perform the operation. Therefore, as further discussed below, Chaudhuri '171 can not perform a comparison immediately after parsing of the issued SQL sentence without user interaction.

The apparatus described in Chaudhuri '171 is not configured to operate by conducting a “parsing (analyzing) process” and an “index generating process” automatically. Chaudhuri '171 has a user review and analyze situations of previous accesses that is used to review and analyze situations of previous accesses at a certain point in time, and further to manually generate an index. Chaudhuri '171 can not parse a SQL sentence to be executed on a real time basis because a unit for generating and analyzing an index, and a unit for functioning as a database server of the apparatus

described in Chaudhuri '171 are separate from each other. Accordingly, an external tool analyzing an index is located outside of the database. (See FIGs. 2-3).

In Chaudhuri '171, a work file is generated by a function belonging to a database and has a history file of records of situations associated with previously performed accesses. (See col. 6, lns. 50-59). Chaudhuri '171 merely describes a method for progressing an analysis based on a work file, and using an interface connected to a database server. (See col. 12, lns. 33-34). The apparatus of Chaudhuri '171, which is a functional unit having functions including that of analyzing an index, is considered to be independent from a database. Thus, since this apparatus is configured in the above-described manner, the apparatus can not parse an SQL sentence and generate an index on a real time basis. Chaudhuri '171 merely describes a method in which a user reviews and analyzes situations associated with previously performed accesses, and generates an index at a certain point and time (*i.e.*, a method in which an ANALYZE sentence is executed). (See col. 18 to col. 22).

In contrast, the present invention, as now recited in the amended independent claims, parses the issued SQL sentence and makes a comparison immediately after parsing the issued SQL sentence “without user interaction,” between a cost required when retrieval is performed after an index corresponding to a retrieval condition is generated dynamically and a cost required when retrieval is performed without generating an index dynamically. A function unit for generating and maintaining an index is provided that has a database function merged together with an index

generating and maintaining function. Consequently, the function unit of the present invention can parse an SQL sentence and generate an index on a real time basis, unlike Chaudhuri '171. More specifically, Chaudhuri '171 does not include the feature of providing optimum access to a user and increasing the speed of retrieval by "parsing an SQL sentence to be executed" and "generating an index" automatically on a real time basis. For these reasons, withdrawal of the §102(e) rejection of claims 1, 4, 10, 13 and 16 is respectfully requested.

Claims 3, 8, 12 and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri '171, and further in view of Chaudhuri et al. (U.S. Patent No. 6,169,983, hereinafter Chaudhuri '983). Applicants respectfully traverse the rejection for the reasons recited above with respect to the §102(e) rejection.

Chaudhuri '983 suffers from the same deficiencies as Chaudhuri '171. More specifically, the "parsing (analyzing) process" and "index generation process" are not automatic. Chaudhuri '983 simply does not make a comparison immediately after parsing the issued SQL sentence without user interaction. Chaudhuri '983 has separate units generating and analyzing an index, and functioning as a database server, and suffers the same drawbacks as Chaudhuri '171. Accordingly, the combination of Chaudhuri '171 and Chaudhuri '983 fails to overcome the deficiencies noted above with respect to Chaudhuri '171, and therefore withdrawal of the §103(a) rejection of claims 3, 8, 12 and 15 is respectfully requested.

Claims 2, 5-7, 11 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri '171, and further in view of Smith et al. (U.S. Patent No. 5,404,510). Applicants respectfully traverse the rejection for the reasons recited above with respect to the §102(e) rejection of claims 1, 4, 10, 13 and 16.

The deficiencies of Chaudhuri '171 are noted above. Smith is merely cited for teaching that a new index is generated by using a first index, if the first index which satisfies a wider condition exists. That is, Smith is cited for teaching a method of index selection. However, Smith also fails to overcome the deficiencies of Chaudhuri '171 noted above, and therefore withdrawal of the §103(a) rejection of claims 2, 5-7, 11 and 14 is respectfully requested.

Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri '171 and Chaudhuri '983, and further in view of Smith. Applicants respectfully traverse the rejection for the reasons recited above with respect to the rejection of independent claim 3.

Since claim 9 depends upon claim 3, and necessarily includes all of the features of its associated independent claim plus other additional features. Thus, Applicants submit that the §103(a) rejection of claim 9 has also been overcome for the same reason as mentioned above to overcome the rejection of independent claim 3. Applicants respectfully request that the §103(a) rejection of claim 9 also be withdrawn.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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